

# 11

## **Lesson 11** **Introduction to** **Tables**

### **Lesson Topics**

- ▶ HTML Tables
- ▶ Table Tag <TABLE>
- ▶ Creating Page Columns with Tables
- ▶ Lesson 11 Summary

## HTML Tables

HTML tables are one of the more powerful and functional features of HTML. Tables were not a part of the original HTML specification. To create a table-like arrangement of data in an HTML document, it used to be necessary to use the `<PRE>` tag. This often provided mediocre or undesired results.

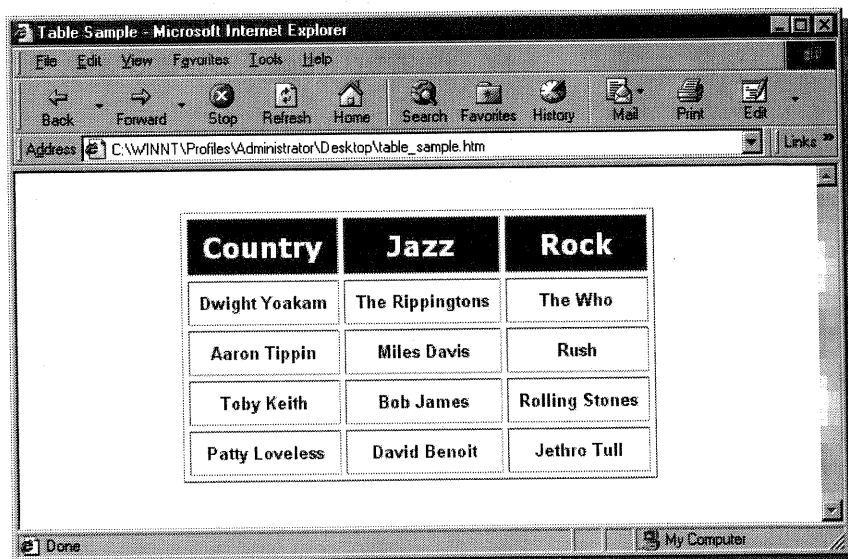
### A Family of Tags

As with the list tags (`<OL>` and `<UL>`), tables are comprised of a family of tags. Due to the number of tags, HTML tables can be confusing and cumbersome to create, especially for novice HTML authors. With practice, the creation and editing of HTML tables can become a quick, efficient process.

As you will learn in the remaining Lessons of this course, tables can support sophisticated formatting and allow you to layout a Web page in ways not possible with other HTML conventions. You can:

- embed tables within tables (called *nesting*);
- span table cells across rows or columns;
- insert image or text hyperlinks within a table cell.

A sample HTML table is displayed in Figure 11-1.



Country	Jazz	Rock
Dwight Yoakam	The Rippingtons	The Who
Aaron Tippin	Miles Davis	Rush
Toby Keith	Bob James	Rolling Stones
Patty Loveless	David Benoit	Jethro Tull

Figure 11-1: Example of an HTML table

## Table Tag <TABLE>

The <TABLE> tag, a non-empty tag, is the basis for any HTML table. Two associated tags, <TR> and <TD> (shown in Table 11-1), control the layout and appearance of a table.

Tag	Description
<TR>	<ul style="list-style-type: none"> <li>■ Specifies a table row</li> <li>■ Non-empty tag</li> </ul>
<TD>	<ul style="list-style-type: none"> <li>■ Specifies a table cell</li> <li>■ Officially a non-empty tag, but can be used as an empty tag in major browsers</li> </ul>

Table 11-1: The <TABLE> tag family

The above tags and their corresponding attributes are shown in Table 11-2.

Tag	Attribute	Value Range	Function
<TABLE>	BORDER	1-100 pixels	Specifies a visible border and its thickness. Can be used with no value to specify a thin border. If this attribute is omitted, no visible border or gridlines will appear.
<TABLE>	BORDERCOLOR	Colors & RGB codes	Specifies the color of the outside border (not gridlines).
<TABLE>	CELLPADDING	1-100 pixels <sup>20</sup>	Specifies amount of spacing <i>inside</i> table cells.
<TABLE>	CELLSPACING	1-100 pixels	Specifies amount of spacing <i>between</i> table cells.
<TABLE>	WIDTH	1-100%	Specifies the width of the table relative to the width of the Web page.
<TR>, <TD>	ALIGN	left, center, right	Specifies the horizontal alignment of text within a row or individual cell.
<TR>, <TD>	BGCOLOR	Colors & RGB codes	Specifies a fill color for rows or cells.

Table 11-2: Common HTML table attributes

<sup>20</sup> For best appearance, the **CELLPADDING** and **CELLSPACING** values should not exceed 20.

### Exercise 11-1: Creating a Basic Table

In this exercise, you will create a basic table consisting of three rows and four columns. Text inside the table cells will be default justified; the table itself will be default justified left.

1. Switch applications to your text editor.
2. Open the file AUTOS\_TABLE.HTM from the HTML-2 folder.
3. Add the bold script (as shown below) to the text on your screen:

```
<FONT SIZE=+2 COLOR=blue>Automobiles of the World</FONT><P>
```

```
<TABLE BORDER=3>
```

```
<TR>
```

```
<TD><B>American</B></TD>
```

```
<TD><B>German</B></TD>
```

```
<TD><B>Japanese</B></TD>
```

```
<TD><B>British</B></TD>
```

```
</TR>
```

```
<TR>
```

```
<TD>Ford</TD>
```

```
<TD>Porsche</TD>
```

```
<TD>Toyota</TD>
```

```
<TD>Jaguar</TD>
```

```
</TR>
```

```
<TR>
```

```
<TD>Saturn</TD>
```

```
<TD>BMW</TD>
```

```
<TD>Acura</TD>
```

```
<TD>Rolls Royce</TD>
```

```
</TR>
```

```
<TR>
```

```
<TD>Chrysler</TD>
```

```
<TD>Audi</TD>
```

```
<TD>Mitsubishi</TD>
```

```
<TD>Land Rover</TD>
```

```
</TR>
```

```
</TABLE><P>
```

4. Save the HTML document.
5. Switch applications to your Web browser.
6. Reload the Web page.
7. Compare the screen that is displayed in your Web browser with Figure 11-2. If they are not nearly identical, repeat the steps of this exercise, taking care to accurately type the script in Step 2.

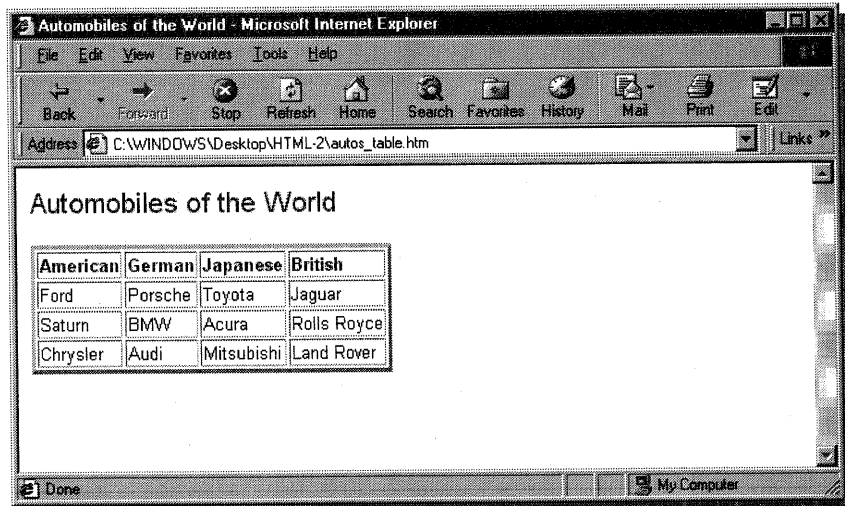


Figure 11-2: Basic HTML table



Tables can be horizontally centered on a page using the `<CENTER>` tag. Remember that `<CENTER>` is a non-empty tag.

## Exercise 11-2: Using Basic Formatting and Adding Color to a Table

In this exercise, you will align data within table cells and add color to table cells and rows. The tags and attributes, such as `<FONT>`, `FACE`, and `COLOR`, are a review of what you learned in DDC's *HTML 4.0 Fundamentals* regarding text formatting.

1. Switch applications to your text editor, and open AUTOS\_TABLE.HTM, if necessary.
2. Edit the `<TABLE>` tag script from the previous exercise, adding the bold script (as shown below):

```
<CENTER>
<FONT SIZE=+2 COLOR=blue>Automobiles of the World</FONT><P>

<TABLE BORDER=8 CELSPACING=10 BORDERCOLOR=black>

<TR BGCOLOR=gray ALIGN=center>
<TD><B><FONT FACE=arial COLOR=white>American</FONT></B></TD>
<TD><B><FONT FACE=arial COLOR=white>German</FONT></B></TD>
<TD><B><FONT FACE=arial COLOR=white>Japanese</FONT></B></TD>
<TD><B><FONT FACE=arial COLOR=white>British</FONT></B></TD>
</TR>

<TR ALIGN=center>
<TD BGCOLOR=yellow>Ford</TD>
<TD BGCOLOR=pink>Porsche</TD>
<TD BGCOLOR=brown><FONT COLOR=white>Toyota</FONT></TD>
<TD BGCOLOR=green><FONT COLOR=white>Jaguar</FONT></TD>
</TR>

<TR ALIGN=center>
<TD BGCOLOR=yellow>Saturn</TD>
<TD BGCOLOR=pink>BMW</TD>
<TD BGCOLOR=brown><FONT COLOR=white>Acura</FONT></TD>
<TD BGCOLOR=green><FONT COLOR=white>Rolls Royce</FONT></TD>
</TR>

<TR ALIGN=center>
<TD BGCOLOR=yellow>Chrysler</TD>
<TD BGCOLOR=pink>Audi</TD>
<TD BGCOLOR=brown><FONT COLOR=white>Mitsubishi</FONT></TD>
<TD BGCOLOR=green><FONT COLOR=white>Land Rover</FONT></TD>
</TR>

</TABLE>
</CENTER><P>
```

3. Save the HTML document.
4. Switch applications to your Web browser.
5. Reload the Web page.
6. Compare the two tables you just created. Note the effect of the attributes and text formatting you used. Your tables should appear similar to Figure 11-3. If not, repeat the steps of this exercise, taking care to accurately type the script in Step 2.

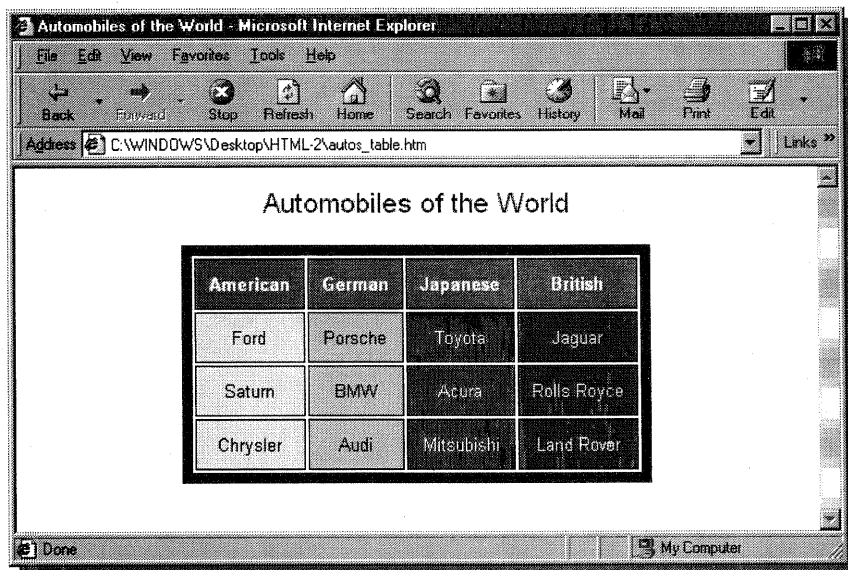


Figure 11-3: Enhancing a table

7. In the opening `<TABLE>` tag, change the attribute `CELLSPACING` to `CELLPADDING`. Keep the value at **10**. How does this change your table? Change the value to **20**. What change does this make? What effect is created if you use both attributes? Experiment with the `CELLSPACING` and `CELLPADDING` attributes as time permits.



`BORDERCOLOR` and `BGCOLOR` (when applied to tables) are not part of the official HTML 3.2 or 4.0 Specifications. They are examples of HTML extensions, but are recognized by both Netscape Navigator and Microsoft Internet Explorer. Because these two browsers comprise 99% of the browser market, you can apply these two attributes to tables with confidence.

### Exercise 11-3: Embedding Images in a Table

In this exercise, you will embed two images in a table with adjacent descriptive text in a manner that creates an attractive, artistic effect.

1. Switch applications to your text editor.
2. Open the file IMAGES\_TABLE.HTM.
3. Add the bold script (as shown below) to the text on your screen:

```
<H3>Inserting Images in a Table</H3>
```

```
<CENTER>
```

```
<TABLE WIDTH=50% BORDER=3 CELLPADDING=5>
```

```
<TR>
```

```
<TD>"On the road of life, what comes around the next corner is often  
uncertain...."</TD>
```

```
<TD><IMG SRC=road.jpg></TD>
```

```
</TR>
```

```
<TR>
```

```
<TD><IMG SRC=wild.jpg></TD>
```

```
<TD ALIGN=right>"Hey, buddy...can you point me toward a good country bar  
in Nashville?"</TD>
```

```
</TR>
```

```
</TABLE>
```

```
</CENTER><P>
```

4. Save the HTML document.
5. Switch applications to your Web browser.
6. Reload the Web page.



7. Note the alignment of the text. Compare the table you just created with Figure 11-4. They should appear nearly identical. If they are not, repeat the steps of this exercise, taking care to accurately type the script in Step 3.

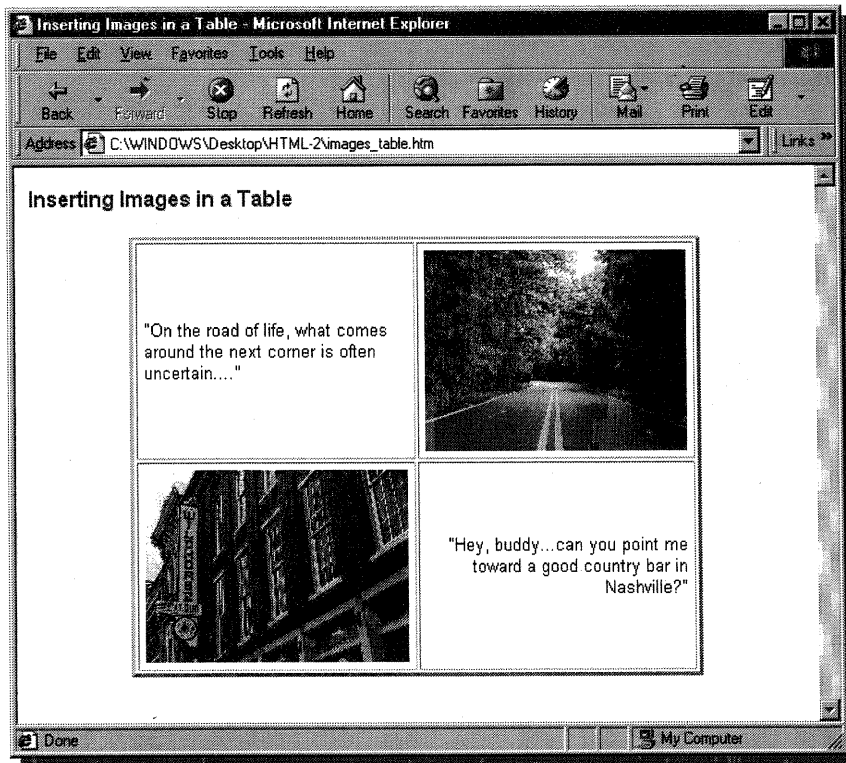


Figure 11-4: Inserting images into a table



The use of left and right text alignment can be particularly visually appealing when used as captions for images in tables, as in Figure 11-4 above.



A table scripted without the `BORDER` attribute will display the cell data arranged in rows and columns, but without a visible border. Remember to use the `BORDER` attribute in the `<TABLE>` tag if you desire a visible border.

## Creating Page Columns with Tables

You will often have a need to add more structure to a Web page. HTML contains relatively few page layout conventions. Those that HTML does offer, such as `<BR>`, `<P>`, and `<HR>`, are relatively simple and lack sophisticated attributes.

### Add Page Structure with Two Column Tables

One of the simplest ways to add substantial structure to a page is to insert the entire contents of the page into an “invisible” table. The purpose is not to create a pattern of cells established by rows and columns, as is typical when using tables. Rather, the desire is to create a two or three column page (three column pages are also known as “newspaper layout”). Such layouts can be accomplished easily with a two or three column table comprised of two or three cells, respectively.

The advantages of inserting Web page content into a two column table are:

- taking advantage of the right margin of the page, an area that is traditionally “waste land” in HTML;
- making your pages more compact, thus requiring visitors to scroll less;
- substantially improving the aesthetic appeal of your pages.

Compare the two Web pages shown in Figure 11-5. They are identical with the exception that the content of the right page has been inserted into a simple two column table. Note that the table-enhanced page has no `BORDER` attribute and a `CELLPADDING=10` attribute to create necessary white space between the two columns.

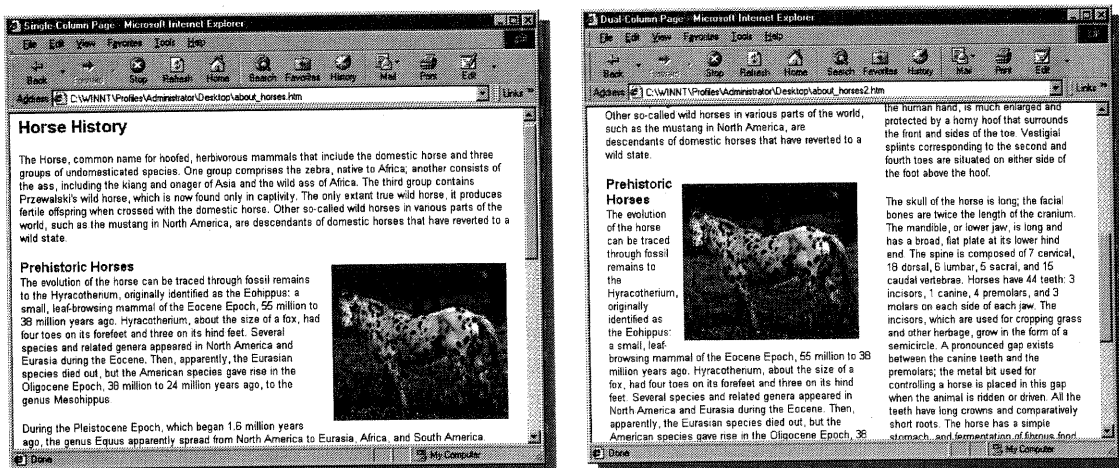


Figure 11-5: Left page is normal layout; right page has been embedded into a two column table

### Exercise 11-4: Creating Page Columns with a Borderless Table

In this exercise, you will embed the content of the Web page you created in a previous exercise in a simple two-column table. Because this exercise involves inline frames, you need to use the Internet Explorer Web browser to properly complete this exercise.

This particular page, which first displays a large amount of white space on the right margin, will change dramatically in appearance, filling the right side of the page with content. This gives the page a more refined, professional appearance and requires less scrolling.

1. Toggle over to Notepad.
2. Open `INLINE_FRAME.HTM` from the `HTML-2` folder.
3. Add the following script that appears in bold:

```
<FONT SIZE=+2 COLOR=blue>The 50 United States</FONT>.<P>

<TABLE CELLPADDING=10>
<TR>
<TD>
To know about America, you have to study the states and their
history.<P>
Select a state from the list:<P>

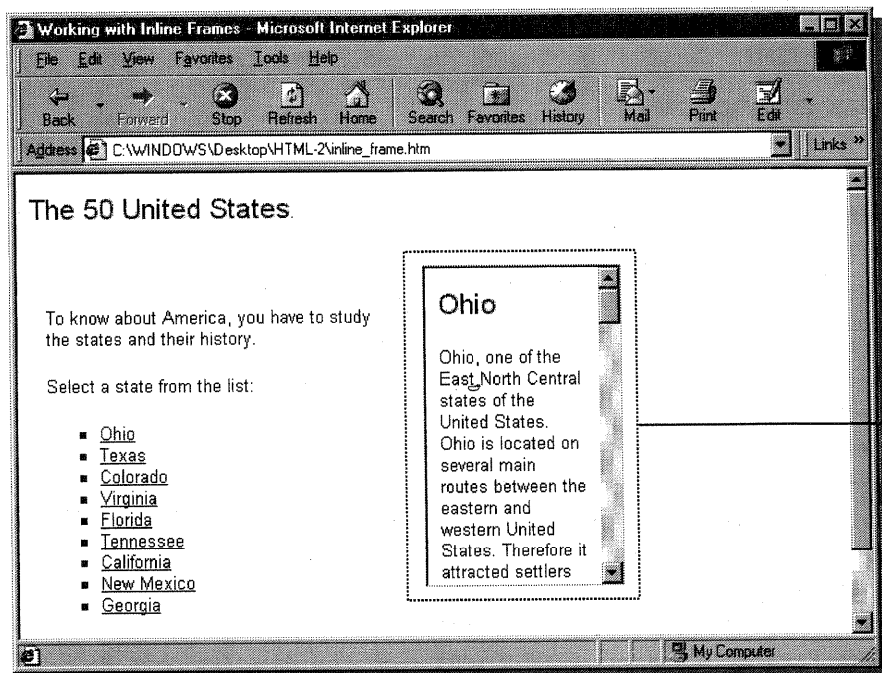
<UL TYPE=square>
<LI><A HREF=ghio.htm TARGET="state">Ohio</A>
<LI><A HREF=texas.htm TARGET="state">Texas</A>
<LI><A HREF=colorado.htm TARGET="state">Colorado</A>
<LI><A HREF=virginia.htm TARGET="state">Virginia</A>
<LI><A HREF=florida.htm TARGET="state">Florida</A>
<LI><A HREF=tennessee.htm TARGET="state">Tennessee</A>
<LI><A HREF=california.htm TARGET="state">California</A>
<LI><A HREF=new_mexico.htm TARGET="state">New Mexico</A>
<LI><A HREF=georgia.htm TARGET="state">Georgia</A>
</UL><P>
</TD>

<TD>
<IFRAME NAME="state" WIDTH=50% HEIGHT=240>
</IFRAME><P><BR><P>
For maps of thousands of locations in the United States, consult the <A
HREF=http://www.mapquest.com>MapQuest Web site</A>.
</TD>
</TR>
</TABLE>
</BODY>
```

4. Save the file.
5. Toggle over to Internet Explorer.
6. Open `INLINE_FRAME.HTM` if necessary. Examine the page as it now appears, without a table and in a single column.
7. Refresh the page. Click any of the hyperlinks to load a document into the inline frame.



The updated page is downloaded and displayed, as shown in Figure 11-6.



**Figure 11-6: Page content inserted into a two column table**



Note the dual-column layout. Also note how the inline frame seems cut in half. Because of the `WIDTH=50%` attribute on the inline frame, it is now occupying only 50 percent of the width of the table cell (whereas previously, without a table, it was occupying 50 percent of the entire page width).

8. Toggle back to Notepad.

9. Change the following script that appears in bold:

```
<IFRAME NAME="state" WIDTH=100% HEIGHT=240>
```

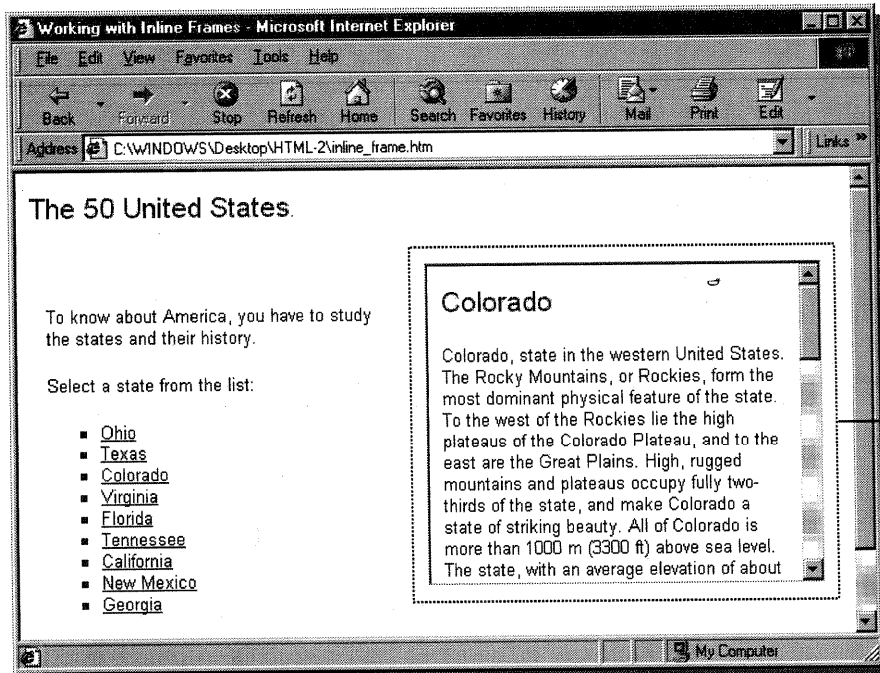
10. Save the document.

11. Toggle over to Internet Explorer.

12. Refresh the page. Click any of the hyperlinks to load a document into the inline frame.



The updated page is downloaded and displayed, as shown in Figure 11-7.



Inline  
frame now  
occupies  
100% of  
the column

Figure 11-7: Inline frame modified to now occupy 100% of the right table column



The inline frame now occupies 100 percent of the right column of the table, providing the page with a much more natural and refined appearance. This is a good example of how you often have to edit and clean up your script in order to properly accommodate the new two column layout.

## Lesson 11 Summary

- ▶ HTML tables allow text and images to be structured into rows and columns in Web pages.
- ▶ The most basic table must include the `<TABLE>` tag, the `<TR>` tag, and the `<TD>` tag. `<TABLE>` is a non-empty tag. `<TR>` and `<TD>` are also non-empty tags, but both major Web browsers support the use of only an opening `<TD>` tag when creating table cells.
- ▶ Text inside table cells can be formatted with any attribute available to standard body text outside of a table. Bold, italic, underline, superscript, and subscript formatting are all applicable. Alignment formatting is also available via table tag attributes.
- ▶ Tables can be centered on a Web page using the `<CENTER>` tag. `<CENTER>` is a non-empty tag.
- ▶ By default, tables have no visible border. The `BORDER` attribute must be used to create a visible frame around a table. An attribute value of between 6 and 12 (`BORDER=10`) is recommended. For the thinnest possible border, do not specify a value.
- ▶ When used, the table tag attributes `CELLPADDING` and `CELLSPACING` provide versatility and aesthetic appeal to a table's appearance.
- ▶ The `CELLPADDING` attribute specifies the amount of spacing *inside* table cells (makes cells fatter).
- ▶ The `CELLSPACING` attribute specifies the amount of spacing *between* table cells (makes gridlines thicker).
- ▶ Although not part of the official HTML 4.0 Specification, color can be added to individual table cells or to an entire row using the `BGCOLOR` attribute. You can use many color names and all RGB codes.
- ▶ You can change the color of a table border by using the `BORDERCOLOR` attribute (not part of the official HTML 4.0 Specification) in the `<TABLE>` tag. You can use many color names (16 "browser-safe" colors) and all RGB codes.
- ▶ You can create page columns with "invisible" tables (tables with no border). Using either two or three column tables, you can create pages with sophisticated layout not typical of Web pages. Creating columns with tables can also help you use the right margin white space that is often wasted. This makes your Web page appear more like a printed publication and typically requires users to scroll less.